

Zone fossils to the "Demon Bluff Formation" and overlying marine section. This suggests the addition of an extra source area contributing to these depositional units.

Dinoflagellates are found sporadically in the Lower N. asperus Zone A subdivision, are present in all samples, but are never very common in the Lower N. asperus Zone B subdivision and Upper N. asperus Zone and finally are common to abundant in the samples from the P. tuberculatus Zone. In general the overall trend is a gradual increase in dinoflagellates from Middle Eocene through to Oligocene. The only exception to this is the occurrence of dinoflagellates in the L. balmei Zone. A single species, Deflandrea dilwynensis was found in SWC 24 at 7730 feet. This species is consistently found associated with other dinoflagellates in marginal marine sediments of L. balmei age, in the Gippsland Basin and therefore probably indicates a marine influence at this time in Pelican-3. Another type of dinoflagellate similar to Deflandrea was found in core samples at 9369 and 9486 feet. Although poorly preserved this appears to be the same species as found in Eocene sediments in the Launceston Basin in Tasmania and suggested as being a possible non-marine dinoflagellate (Partridge 1971).

SAMPLES EXAMINED

Presence and age of reworked spore and pollen present in samples is indicated by the following letters:

- P = Permian
- TR = Triassic
- K = Early Cretaceous
- C = N. senectus to L. balmei Zones

Presence of dinoflagellates in samples is indicated by a asterisk following the depth.

<u>Sample</u>	<u>Depth (in feet)</u>	<u>Zone</u>
SWC 54	4600* C	<u>P. tuberculatus</u>
SWC 53	4800* K	"
SWC 52	5000* K,P	Upper <u>N. asperus</u>
SWC 51	5200*	"
SWC 50	5400* K	"